#27 Appeal Brief (Supp.)

PATENT

ATTY. DOCKET NO.: S4264.000

3/11/98

1 of 3

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Before The Board Of Patent Appeals And Interferences

In Re Appeal of Application:	)
Charles B. SIMONE	)
Serial No.: 08/605,628	)
Filed: February 22, 1996	)
For: METHOD AND APPARATUS FOR LIFESTYLE RISK EVALUATION AND INSURABILITY DETERMINATION	)

APPELLANT'S BRIEF

Assistant Commissioner for Patents
Washington, D.C. 20231

This is an appeal pursuant to 35 U.S.C. § 134 and 37 C.F.R. § 1.191 et seq. from the final rejection of claims 1-8, of the above-identified application on April 29, 1997. The requisite fee for submitting this brief ($150.00, 37 C.F.R. §

1.17(f)) was filed with the previous appeal brief submitted by appellants on August 30, 1996. Since this appeal was never considered by the Board, no additional fee is believed due. Any deficiency in the fees associated with this brief should be charged to deposit account no. 04-1073. The Notice of Appeal for the current appeal was filed on July 29, 1997.

I. REAL PARTY IN INTEREST

The real party in interest is Charles B. Simone, named inventor of the instant application.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to Appellant or Appellant's representative which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

Claims 1-8 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

Claims 1-8 stand rejected under 35 U.S.C. § 103 as being unpatentable over DeTore et al. (U.S. Patent No. 4,975,840).

IV. STATUS OF AMENDMENTS

No amendments have been filed subsequent to the rejection issued on April 29, 1997.

V. SUMMARY OF INVENTION

The present invention relates to a system and method for evaluating the health insurance liabilities of individuals based on their respective life styles. More specifically, this invention relates to a computer system for evaluating the cost to an employer or an insurance administrator for insurance coverage for individuals, where this cost will be a function of inputs reflecting lifestyle choices of the individual. The claimed computer system performs a detailed analysis of an individual's lifestyle factors by assessing the risks associated with such factors. The computer system then assigns a monetary insurance value to that individual based on a complete assessment of the lifestyle factors.

A valuable result of the above described system, is that the invention provides a completely automated health insurance evaluation system wherein a potential insured can interactively respond to a computer generated query. (Specification, page 8, lines 15-18). The questions cover a wide array of lifestyle choices including: use of various drugs, geographic information, exercise habits, nutrition patterns, social/sexual behavior, occupational data, exposure to radiation and chemicals, and stress. (Specification, p. 17, lines 2-9; see also, Fig. 2). To assure the veracity of the answers, a separate set of medical questions is sent to the respondent's doctor or lab technologist. (Specification, p.17, lines 9-11).

The computer system also attaches a positive or negative value to each response. Depending on the total points assigned a person, he or she would be placed in one of four health insurance plans. (Specification, p. 9, lines 1-11).

In addition, the computer system correlates past values to present insurance premiums subsequent to the initial survey such as to reward an improvement in an individual's health. (Specification, p. 9, lines 16-20). Thus, the system

provides respondents with an incentive to modify their lifestyles. The system further recommends methods for such modification. (Specification, p. 15, lines 16-25). For example, messages include information pertaining to correct vitamin doses, intake level of certain foods, suggestions on life style modifications, and recommendations for exercise. (Specification, pp. 15-16).

Thus, the present invention recites a computer system that analyzes and weighs a vast array of information covering an individual's lifestyle, health, and medical records in order to derive an accurate insurance risk evaluation for that individual. (Claim 1, lines 1-25). Additionally, the invention by way of providing incentives, recommends ways to improve the individual's lifestyle such as to reduce risk factors.

VI. ISSUES

A. Whether claims 1 - 8 were properly rejected under 35 U.S.C. § 101 as failing to recite statutory subject matter?

B. Whether claims 1 - 8 were properly rejected under 35 U.S.C. § 103 as being unpatentable over DeTore et el.?

VII. GROUPING OF CLAIMS

Claims 1 - 8 stand or fall together.

VIII. ARGUMENT

A. Claims 1-8 Recite Statutory Subject Matter, And Therefore The Rejection Under 35 U.S.C. § 101 Should Be Reversed by the Board.

1. The Claims As Presented Are Statutory Computer Claims.

Claims 1-8 are directed to statutory subject matter. Title 35 U.S.C. § 101 provides that patents may be granted for "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof." The broad sweep of section 101, while not encompassing laws of nature or a mathematical expression thereof, might indeed cover "a novel and useful structure created with the aid of knowledge of scientific truth." Mackay Radio & Telegraph Co. v. Radio Corp. of America, 306 U.S. 86, 94 (1939); see also Diamond v. Diehr, 450 U.S. 175, 188 (1981). This distinction may be phrased as "a patentable 'process' and an unpatentable 'principle.'" Parker v. Flook, 437 U.S. 584, 590 (1978). In a recent landmark decision the Court of Appeals for the Federal Circuit stated:

> The plain and unambiguous meaning of §101 is that any new and useful process, machine, manufacture,

> or composition of matter, or any new and useful improvement thereof, may be patented if it meets the requirements for patentability set forth in Title 35, such as those found in §§ 102, 103, and 112. The use of the expansive term "any" in § 101 represents Congress's intent not to place any restrictions on the subject matter for which a patent may be obtained beyond those specifically recited in § 101 and the other parts of Title 35 . . . . Thus, it is improper to read into § 101 limitations as to the subject matter that may be patented where the legislative history does not indicate that Congress clearly intended such limitations.

In Re Alappat, 33 F.3d 1526, 1542 (Fed. Cir. 1994). This decision reiterated the notion that computers operating pursuant to software can be patentable subject matter because "a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software." Id. at 1545.

Claims 1-8 of the present invention all contain a general purpose computer specifically programmed to perform particular functions, as in Alappat. In particular, the general purpose computer becomes a unique insurability evaluation system that not only factors in current medical problems, but also takes into account various lifestyle choices of individuals. (see, claim 1, lines 1-4, reciting "A computer system for evaluating

insurability of at least one individual, comprising: survey means for gathering information pertaining to said individuals' lifestyle, health, and medical tests;"). The system performs a number of particular functions, including surveying individuals to obtain information regarding health, lifestyle and medical tests, assigning weight values to each discrete piece of information, determining level of insurability risk based on weight values, and providing information for improving health and decreasing insurability risk. (claim 1, lines 6-14). Pursuant to instructions from the software, the general purpose computer becomes a special purpose system that renders a complete analysis of the individuals' health, calculates the amount of insurability risk, and serves as a mechanism for dispensing helpful recommendations for improving an individuals' health status and for decreasing insurability risk.

2. Claims 1 And 7 Are Statutory Because They Are Process Claims Which Recite Pre-Computer Process Activity

Claim 1 recites a process claim for "determining the insurability of an individual." Claim 7 recites a process claim, in terms of a method, for "evaluating insurability of at least

one individual." A process claim is defined as a claim that requires one or more acts to be performed. M.P.E.P. § 2106 (IV)(B)(2)(b)(1996). As such, claims 1 and 7 are patentable if it can be shown that the process requires measurements of physical objects or activities which are transformed in the computer. M.P.E.P. § 2106 (IV)(B)(2)(b)(i)(1996). The data which is input to the claimed process by the individual is representative of physical activities, namely how much and what one eats, how much and what types of tobacco products one uses, how much and what types of exercise one engages in, etc.(specification, p.17, l.3-8).

Furthermore, the data input by the individual's physician represents physical objects or activities, namely cholesterol level, glucose level, functioning of the patient's liver, etc.(specification, p.17, l.12-14). The answers to these questions are not merely abstract concepts or ideas, but are representative of the individual's personal lifestyle. These answers are input into the process, and the process in turn transforms these signals into signals representative of the input information. Then, these transformed signals are weighted and

assigned risk values. These weighted signals are then summed to determine an overall value for all the information. (specification, p. 27). The summed signals are then compared and evaluated against pre-defined values pre-stored in the computer memory to determine the overall insurability of the individual. (specification, p. 30). The office action indicates that the claims are non-statutory because there is no post-solution activity. That,however, has has never been appellants contention as the basis for holding that the claims pass muster under § 101. (Final Rejection, p.6). Post-solution activity is <u>not</u> a requirement for patentability of computer related inventions. It is rather simply one of several acceptable ways to describe computer related inventions in order to make them statutory. Instead the claimed invention is described in terms of pre-computer process activity, which as discussed before, is another class of statutory inventions. Therefore, because the claims recite pre-computer process activity, they are statutory. Finally, the claims do contain post solution activity language, and that post solution activity is significant and not a mere field of use type limitation.

3. Claims 1 And 7 Are Statutory Processes Because They Are Limited To A Practical Application In The Technological Arts

Claims 1 and 7 are further statutory because the invention recited therein is limited to a practical application in the technological arts. For a claimed process to be statutory under this rule, "the claimed process must be limited to a practical application of the abstract idea or mathematical algorithm in the technological arts." M.P.E.P. § 2106 (IV)(B)(2)(b)(ii)(1996). The claim must be viewed as a whole to determine if a mathematical algorithm is recited. M.P.E.P. § 2106 (IV)(B)(2)(c)(1996). If the process in the present case is considered merely a mathematical algorithm, which it is not (because as explained above it is a computer that subject to software instructions performs particular functions), it is certainly limited to a practical application because the claims limit the use of the process to a special computer system for determining the insurability of an individual. As indicated, this system is a general purpose computer which has been programmed and arranged to become a special purpose computer which, in turn, can only be used for the specific functions described in this application. Therefore, the claims do not

encompass any and every means for making the desired determination, they only encompass the use of a specially programmed computer to do such analysis. For instance, the claims do not prohibit a doctor from gathering information from an individual and evaluating the individual's chance of heart disease using his own general purpose computer. Therefore, use of the mathematical algorithm is limited to a practical application as required by M.P.E.P § 2106 (IV)(B)(2)(b)(ii)(1996). Preclusion of members of the public from performing processes already known, by doing them on a computer, is at the heart of § 101. The granting of a patent on the claimed invention would not preclude the underlying process from being performed in other ways.

In the Final Rejection the examiner refers the appellant to M.P.E.P. § 2106(IV)(B)(2)(c-d). Subsection (c) discusses non-statutory process claims. That subsection states that if the "acts of a claimed process manipulate only numbers, abstract concepts or ideas, or signals representing any of the foregoing," the claim is non-statutory. However, a plain reading of the claims recite processes that do not merely manipulate

numbers or abstract ideas, but rather analyze information submitted by an individual and an individual's physician relating to the health and personal lifestyle of the individual. Subsection (d) of § 2106(IV)(B) deals with claim language concerning process steps. The final office action states at p.7 of the Final Rejection that step of gathering data is not significant, the appellant strongly disagrees. Subsection (ii) of subsection(d) states that:

> If a claim requires acts to be performed to create data that will then be used in a process representing a practical application of one or more mathematical operations, those acts must be treated as further limiting the claim... M.P.E.P. § 2106 (IV)(B)(2)(d)(ii)(1996).

The claimed processes require the data gathering steps in order to create data which is practically applied to an algorithm for evaluating the insurability of an individual. Therefore, the data gathering steps must be treated as further limiting the claim. Hence, the final office action's contention that the claims state nothing more than mathematical algorithms is without merit.

Furthermore, subsection (iii) of subsection (d), discusses limitations after mathematical computation which

further limit a process claim. Specifically, that subsection states: "...if a claims requires that the direct result of a mathematical operation be evaluated and transformed into something else..." that limitation must be treated as further limiting the mathematical operation. M.P.E.P. § 2106 (IV)(B)(2)(d)(iii)(1996). In claim 1, the "evaluation means" evaluates the result of a computer operation (summing) and then transforms the evaluation data into signals representative of pre-defined suggestions for output through the messaging means. Therefore, these post mathematical operation steps must be considered as further limiting the claim. Id. The method of claim 7 contains a similar limitation. The examiner points out, on page 5 of the Final Rejection, that the messaging means for providing the pre-determined suggestions does not further limit the claim because some individuals are not provided with messages. The final office action misreads the claim. The messaging means provides suggestions to every user of the system. The language "at least such individual" means that the messages can be provided to others besides the individual who input the information. Since the data is transformed for output after the mathematical operation, these steps(evaluating,messaging) must be

considered as further limiting the claims. Therefore, since significant steps are performed before and after the mathematical solution, the claims define more than a mathematical algorithm and must be considered patentable under 35 U.S.C. § 101.

4. Claims 2-6 And 8 Define Patentable Subject Matter

Claims 2-6 and 8 were rejected as being dependent on claims 1 and 7, which were rejected under 35 U.S.C. § 101. For the reasons discussed above, claims 1 and 7 are believed to encompass patentable subject matter, and therefore claims 2-6 and 8 should be characterized as patentable as well.

B. Claims 1-8 Are Non-Obvious Over Detore Et Al., And The Rejection Under 35 U.S.C. § 103 Should Be Reversed By This Board.

Claims 1-8 are non-obvious over DeTore et al. The present invention discloses a system which provides for a detailed analysis of an individual's lifestyle and accompanying risks in order to make a monetary insurance value assessment. Unlike the claims of the present invention which are described in more detail below, DeTore analyzes only general characteristics of an individual's risk, and therefore renders an evaluation

based on an incomplete picture of an individual. Moreover, DeTore fails to provide useful and practical suggestions to improve one's health.

First, DeTore does not make an analysis based on an individual's all-around lifestyle, including both present and future effects, as provided in the claims of the present invention. (For example, claim 1, lines 3-4, recites "survey means for gathering information pertaining to said individuals' lifestyle, health, and medical tests."; see also claim 6; and claim 7, lines 1-4). Rather, DeTore appears to make an assessment on existing dangerous leisure activities and to calculate the attendant risks. Specifically, the aspects of an individual's lifestyle which are assessed in DeTore are alcohol use, illicit drug use, and relevant driving history. (Specification, column 12, lines 58-61). When DeTore inquires into these activities, however, it does so solely to determine whether or not coverage should be declined. Id., at lines 61-62.

By contrast the present invention, as claimed, provides a weight which is assigned to particular activities, whether or not those activities are risky. Thus, the present

invention as claimed assesses a wide array of lifestyle choices, and assigns a value to each. In particular, claim 1 discloses the gathering of information "pertaining to [one's] lifestyle, health, and medical tests." (claim 1, lines 3-4)(emphasis added). In addition the present invention recites "survey means" (claims 1, l 3-4) and a method of "gathering information" (claim 7, lines 3-4) for evaluating, among other things:

> (1) personal information, (2) geography, (3) occupation, (4) present nutrition, (5) past nutrition, (6) height and weight, (7) tobacco use, (8) alcohol use, (9) hormonal factor, (10) exercise, (11) stress, (12) radiation and chemicals, (13) personal history, (14) drug use, (15) family history, (16) safety, (17) medical information, and (18) pets.

(Specification, p. 17, lines 3-9). By automatically assessing a variety of health-related categories, the present invention is able to evaluate all characteristics of an individual, thus providing a full and more precise assessment of risks. By contrast, DeTore only assesses existing medical problems and other red flags such as tobacco or illicit drug use to evaluate risks. The present invention goes farther than that recognizing the fact that the one's "lifestyle" rather than merely one's existing medical problems has a significant impact

on one's health. As such, the present invention, unlike DeTore, treats such choices as an integral part of the risk analysis. By evaluating the individual as a whole, taking into account present conditions and possible effects in the future, the present invention makes a proper risk assessment. (see, claim 2, lines 3-4, reciting means for assigning "negative values for actions that increase insurance risks and positive values for actions that decrease insurance risk.").

Armed with a precise assessment of an individual's health, the present invention utilizes messaging means (claim 1, lines 19-20) and provides the respondent with useful recommendations for treatment of health problems and for altering one's lifestyle to ensure better health in the future. Because these recommendations are discrete pieces of information in response to the wide variety of questions asked, they are specific and closely tailored to the needs of the individual.

In contrast, the DeTore patent merely provides the individual with general literature on a medical problem. For example, as the Examiner noted, DeTore provides suggestions on how to improve one's health in the "TREATMENT" section of the

information supplied to an individual suffering from hypertension (DeTore cols. 19-22). This information, however, is merely a string of general statements on the treatment of hypertension. While it describes different methods for combating hypertension, it fails to make specific recommendations in light of the needs of a particular individual. For example, while DeTore broadly recommends "eliminat[ing] if possible" the risk factor of "elevated cholesterol," the present invention provides a guide for accomplishing this by suggesting the reduction of intake of specific foods. (see, claim 1, lines 19-20, "messaging means for providing messages to at least such individual that contain said pre-defined suggestions."). Such a message may include the following: "CHOLESTEROL is increased by: 1.) Red meat; 2.) Dairy products; 3.) Nuts; 4.) Shellfish." (specification, pp. 15-16).

Additionally, DeTore only provides an individual with recommendations for the treatment of medical problems. It fails to make suggestions regarding other factors that contribute to poor health, such as certain lifestyle choices, as does the present invention. (see, claim 7, lines 17-20, "choosing

pre-defined suggestions for improving health and decreasing risk based upon said insurance comparison; providing messages to such individual that contain said pre-defined suggestions;"). For example, for individuals who spend a lot of time at the beach, the present system will provide a message that provides cautionary information on radiation exposure (e.g., specification, p. 15, lines 20-22). By failing to provide useful advice on a great number of day-to-day activities, DeTore neglects to access many other causes of health problems. Hence, it cannot serve as a mechanism to which an individual can turn when seeking out useful information for modifying lifestyle to attain better health.

Contrary to the final office action's contention, a complete survey of an individual's health is not an obvious application of DeTore because it is not in the ordinary practice of risk assessors to inquire into a wide variety of lifestyle choices, let alone to provide recommendations to individuals as to how to reduce insurability risk. As is common in the field of risk assessment, DeTore only focuses on evaluating existing medical problems. It cannot take into consideration lifestyle

data as recited in claims 1-8 of the present invention. Likewise, DeTore fails to provide a basis for determining the effect of lifestyle choices on health insurance coverage as claimed by the present invention. (claim 1). Finally, DeTore fails to analyze and then provide a user with suggestions for improving his or her health condition as in all the claims of the present invention.

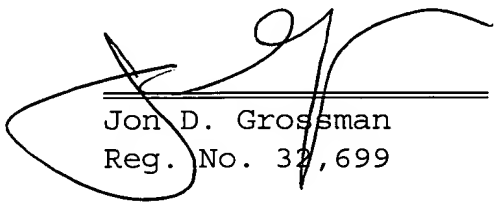
In conclusion, the present invention is novel because, in calculating insurance risk, it surveys a wealth of information pertaining to an individual's health. Not only does the present invention evaluate the insurance risk, but it also provides suggestions for improving health and decreasing risk. These functions cannot be accomplished by simple mechanisms which evaluate insurability risk, such as DeTore as well as the other cited prior art references.

Accordingly, claims 1-8 are non-obvious over DeTore et al. and the rejection under 35 U.S.C. § 103 should be reversed by this Board.

IX. CONCLUSION

Therefore, the claims in the present application recite patentable subject matter under 35 U.S.C. § 101, and the claims are non-obvious over DeTore et al. under 35 U.S.C. § 103. The final rejection of claims 1-8 is in error, for at least the reasons given above, and this rejection should be reversed by the Board.

Respectfully submitted,



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Dated: September 22, 1997.

APPENDIX OF CLAIMS ON APPEAL

1. A computer system for evaluating insurability of at least one individual, comprising:

survey means for gathering information pertaining to said individuals' lifestyle, health, and medical tests;

entry means for inputting said gathered information;

a memory for receiving and storing said gathered information;

means for assigning weight values for each of said stored information;

means for assigning risk values to each of said weight values that represent levels of insurance risk;

means for determining a total value based upon said assigned risk values and said assigned weight values for all of said gathered information;

evaluating means for comparing each of said total values for said gathered information with pre-defined accepted values

and choosing pre-defined suggestions for improving health and decreasing risk;

messaging means for providing messages to at least such individual that contain said pre-defined suggestions;

analyzing means for determining said level of insurance risk such that both a cost and an insurability profile is determined; and

communicating means for automatically communicating said level of insurance risk.

2. The computer system for evaluating insurability of claim 1, wherein said means for assigning risk values assigns negative values for actions that increase insurance risk and positive values for actions that decrease insurance risk.

3. The computer system for evaluating insurability of claim 1, further comprising a second memory to store underwriter information including said risk values and said weight values.

4. The computer system evaluating insurability of claim 1, further comprising a questionnaire memory means to store a questionnaire said questionnaire being employed by said survey

means in order that such individual can select appropriate responses to lifestyle questions.

5. The computer system for evaluating insurability of claim 1, wherein said pre-defined suggestions are automatically differentiated by said computer system for pregnant users.

6. The computer system for evaluating insurability of claim 1, wherein said gathered information about lifestyle includes tobacco use, alcohol use and food intake.

7. A method of evaluating insurability of at least one individual, comprising the steps of:

gathering information pertaining to lifestyle, health, and medical tests;

receiving and storing said gathered information in a memory;

assigning weight values for each of said stored information;

assigning risk values to each of said weight values that represent levels of insurance risk;

determining a total value based upon said assigned risk values and said assigned weight values for all of said gathered information for such individual;

creating an insurance comparison by comparing each of said total values for said gathered information with pre-defined accepted values;

choosing pre-defined suggestions for improving health and decreasing risk based upon said insurance comparison;

providing messages to such individual that contain said pre-defined suggestions;

determining said level of insurance risk such that both a cost and an insurability profile for each of such individuals is determined; and

communicating means for automatically communicating said level of insurance risk.

8. The method of evaluating insurability of at least one individual in claim 7, wherein said step of gathering information comprises the steps of:

providing said individual with a questionnaire; and

receiving said individual's answers from said questionnaire.

TRANSMITTAL OF APPEAL BRIEF	Docket No. A3835.017/P017

In Re Application Of:
Charles B. Simone

Serial No.	Filing Date	Examiner	Group Art Unit
08/605,628	February 22, 1996	Joseph Thomas	2411

Invention:
METHOD AND APPARATUS FOR LIFESTYLE RISK EVALUATION AND INSURABILITY DETERMINATION

TO THE ASSISTANT COMMISSIONER FOR PATENTS:

Transmitted herewith in triplicate is the Appeal Brief in this application, with respect to the Notice of Appeal filed on July 29, 1997

The fee for filing this Appeal Brief (☐ Large Entity ☒ Small Entity) is: $0.00

☐ A check in the amount of the fee is enclosed.

☒ The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 04-1073
A duplicate copy of this sheet is enclosed.

Dated: December 15, 1997

Jon D. Grossman

Reg. No. 32,699